وزارت تحصیلات عالی
پوهنتون رنا
پوهنځی کمپیوتر ساینس
دیپارتمنت انجینری نرم افزار
کورس پالیسی

Subject	Introduction to IT
Teacher Name	Baitullah Malakhil
Phone Number	0788794000
Semester	1th
Subject Code	BIT-111
Number of Credit	4
Prerequisite Subject	None
Learning Objective	1. Demonstrate Fundamental IT Knowledge 2. Apply IT Tools and Software 3. Understand Computer Security Principles 4. Analyze IT Ethical and Legal Issues 5. Troubleshoot Basic IT Problems 6. Collaborate and Communicate Technically 7. Explore Emerging IT Trends
Teaching Methodology	Conceptual + theoretical + Practical demonstrations
Date	23 Sep 2023
Course Assessment	1. Midterm exams 30 % 2. Attendance and group work 10 % 3. Projects, presentations, and other tasks 10 % 4. Final Exam 50 %
Reference Book	1. "Information Technology for Management: Digital Strategies for Insight, Action, and Sustainable Performance" by Efraim Turban, Linda Volonino, and Gregory R. Wood 2. "IT Essentials: PC Hardware and Software Companion Guide" by Cisco Networking Academy 3. "Introduction to Information Systems" by R. Kelly Rainer Jr., Brad Prince, and Casey Cegielski

جدول زمان بندی جلسات در طول سمستر				
Weeks	**Topics**	**Objectives**	**Teaching and Training Activities**	**Evaluation Method**
1	Introduction to the course • Course learning objectives • Course policy • Definition of computer • Computer hardware and software • Types of software • Block Diagram • Computer fundamental	• Understand course goals and objectives. • Comprehend and adhere to course policies. • Define the concept of a computer. • Differentiate computer hardware from software. • Identify various types of software and their functions.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture • assignments	• feedback • Q&A • Discussion • Application • Reflection. • Summative: 1Q for final exam.
2	Generation of computers • First generation of computer • Second generation of computer • Third generation of computer • Fourth generation of computer • Fifth generation of computer	• Describe the characteristics and key components of first-generation computers. • Identify the technological advancements and features of second-generation computers. • Explain the innovations and developments in third-generation computer technology. • Discuss the evolution and improvements introduced in fourth-generation computers. • Explore the concepts and potential of fifth-generation computers, including their impact on computing and	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.

		AI.		
3	Types of Computer • Classification according to Logic used • Classification according to size • Super Computers • Mainframe Computers • Mini Computer • Micro Computers	• Classify computers based on the logic they use, distinguishing between digital, analog, and hybrid computer types. • Categorize computers according to size, understanding the differences between supercomputers, mainframe computers, mini-computers, and microcomputers. • Explain the specific characteristics and capabilities of supercomputers and their applications in scientific and computational tasks. • Describe the role and significance of mainframe computers in large-scale data processing and business operations. • Differentiate between mini-computers and microcomputers,	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
4	Software • Application software • System software Hardware • Internal hardware • External hardware	• Differentiate between application and system software. • Explore examples of application software. • Examine the role of system software. • Categorize hardware as internal and external.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.

		• Understand the significance of internal hardware. • Recognize the importance of external hardware.	the lecture assignments	
5	Input Devices • Keyboard • Mouse • Scanner • Touch Screen • Microphone	• Recognize and define common input devices like keyboards, mice, and microphones. • Understand their primary functions and how they connect with computers. • Explore their practical applications in computing.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
6	Output Devices • Monitors • Loudspeakers • Touch Screen • Printer and its types	• Recognize and define key output devices, like monitors and printers. • Understand their primary functions in displaying or producing information. • Explore different printer types and their applications.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
7	Inside the System Unit • Processor & its Internal units • Buses • System clock	• Recognize the processor and its internal components. • Understand the role of buses in data transfer. • Explain the importance of the system clock in synchronization. •	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.

8	• Adapter cards
	  ○ Sound card
	  ○ Video card
	• Drive bays
		• Recognize adapter cards (e.g., sound and video cards) and	• AO-Asking the students about the previous topic.	• feedback
				• Q&A
				• Discussion
				• Application

	• Power supply	their functions. • Define drive bays for storage devices. • Understand the importance of the power supply in providing electrical power to the computer.	• • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• Reflection. Summative: 1Q for final exam.
9	MID TERM EXAMINATION			
10	Memory: Types of Memory: Primary Memory RAM & Its Types Static RAM Dynamic RAM Cache memory and its types ROM Secondary Memory & its types	• Distinguish between primary and secondary memory. • Describe types of primary memory, such as RAM (Static and Dynamic) and cache memory. • Explain the purpose and characteristics of ROM. • Identify various types of secondary memory. • Understand the role of memory in computer systems.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
11	Number System Conversions • Decimal to Binary • Binary to decimal • Decimal to octal • Octal to decimal • Decimal to hexadecimal • Hexadecimal to decimal	• Convert decimal numbers to binary representation. • Convert binary numbers back to decimal form. • Convert decimal numbers to octal representation. • Convert octal numbers back to decimal form. • Convert decimal numbers to hexadecimal representation and vice versa.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
12	Conversions • Octal to binary • Binary to octal • Hexadecimal to binary	• Convert octal numbers to binary representation. • Convert binary numbers to octal representation.	• AO-Asking the students about the previous topic. • • Specifying the objectives of	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.

	• Binary to hexadecimal • Octal to hexadecimal • Hexadecimal to octal	• Convert hexadecimal numbers to binary representation. • Convert binary numbers to hexadecimal representation. • Convert octal numbers to hexadecimal representation and vice versa.	today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	
13	Computer Networks • Introduction to networking 1. Types of Networks ○ Local Area Network ○ Wide Area Network 2. Network topologies ○ Bus Topology ○ Ring Topology ○ Ring Topology	• Grasp networking fundamentals. • Differentiate LANs from WANs. • Describe Bus, Ring, and Star network topologies. • Explain their respective characteristics. • Recognize the role of topologies in network design.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
14	Database • Introduction to Database • Components of a database • Types of Database Programs ○ File management programs ○ DBMSs ○ RDBMSs ○ Data warehouses ○ Client/server database systems	• Understand the database concept. • Identify key database components. • Differentiate types of database programs (e.g., file management, DBMS, RDBMS, data warehouses, client/server systems). • Explain their functions and roles. • Recognize the importance of choosing the right database program for specific data needs.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.
15	Software Engineering • Introduction to Software Engineering	• Grasp the basics of Software Engineering. • Define software,	• AO-Asking the students about the previous topic.	• feedback • Q&A • Discussion • Application

	– • What is-Software, Software Engineering, Software Process • Elements of Software Design Life Cycle (SDLC)	software engineering, and the software process. • Recognize the key elements of software development.	• • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• Reflection. Summative: 1Q for final exam.
16	Operating systems • What is OS • Types of OS according to Role (Server OS & Client OS) • Types of OS according to task • Types of OS according to source code (Open Source & Non-Open source)	• Define OS and its role. • Identify Server and Client OS. • Recognize OS by task. • Distinguish Open Source and Non-Open Source OS.	• AO-Asking the students about the previous topic. • • Specifying the objectives of today lesson • Lecture presentation • Open discussion • close: summarizing the lecture assignments	• feedback • Q&A • Discussion • Application • Reflection. Summative: 1Q for final exam.

قرار شرح فوق کورس پالیسی مضمون (Introduction to IT) طبق کریکولم ترتیب وصحت است

امضاء استاد

تائیدی آمر دیپارتمنت

کورس پالیسی مضمون (Introduction to IT) در جلسۀ شورای علمی پوهنځی مؤرخ 23 Sep 2023 مورد بررسی قرار گرفت وبه اتفاق آراء تصویب گردید ودر کتاب جلسات به شمارۀ پروتوکول ( ) قید گردید.

نام وامضاء رئیس پوهنځی

مهر پوهنځی